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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,750	09/08/2003	Akira Ueno	OOCL-143 (2003OP512)	1145

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EXAMINER

SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/657,750	UENO, AKIRA	
	Examiner	Art Unit	
	Leonid Shapiro	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-8-03</u> | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4,8,12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Ikeyama (7,068,310 B1).

As to claim 1, Ikeyama teaches an electronic camera apparatus (col. 1, lines 10-15), comprising:

an A/D converting unit obtaining captured image data by A/D converting an image signal that is obtained by capturing an image (fig. 5, item 4, col. 7, lines 32-36);

a first image data processing unit executing a preprocess for generating image data to be recorded from the captured image data (fig. 5, item 5, col. 8, lines 47-50);

a second image data processing unit, which is allowed to execute a process in parallel with the preprocess executed by said first image data processing unit, executing a preprocess that includes a filter process and a pixel number conversion process in order to generate image data to be displayed, whose data amount is smaller than the image data to be recorded, from the captured image data (fig. 5, item 9, col. 2, lines 9-15 and col. 8, lines 16-24);

a storing unit temporarily storing both image data, which is obtained by said

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first image data processing unit and for which the preprocess for generating image data to be recorded is executed (fig. 5, item 18, col. 8, lines 25-29), and image data, which is obtained by said second image data processing unit and for which the preprocess for generating image data to be displayed is executed (fig. 5, item 12, col. 8, lines 51-55); and

a third image data processing unit executing an image process for making recording and a display, which are related to the captured image data, based on the image data to be recorded and the image data to be displayed, which are stored in said storing unit (fig. 5, items 11,17,19, col. 8, lines 25-29 and 51-55).

As to claim 12, Ikeyama teaches an image processing method for use in electronic camera apparatus (col. 1, lines 10-15), comprising:

obtaining captured image data by A/D converting an image signal that is obtained by capturing an image (fig. 5, item 4, col. 7, lines 32-36);

executing a first image data processing unit executing a preprocess for generating image data to be recorded from the captured image data (fig. 5, item 5, col. 8, lines 47-50) or executing a second image data processing unit, which is allowed to execute a process in parallel with the preprocess executed by said first image data processing unit, executing a preprocess that includes a filter process and a pixel number conversion process in order to generate image data to be displayed, whose data amount is smaller than the image data to be recorded, from the captured image data (fig. 5, item 9, col. 2, lines 9-15 and col. 8, lines 16-24);

temporarily storing both image data, which is obtained by said first image data

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processing unit and for which the preprocess for generating image data to be recorded is executed (fig. 5, item 18, col. 8, lines 25-29), and image data, which is obtained by said second image data processing unit and for which the preprocess for generating image data to be displayed is executed (fig. 5, item 12, col. 8, lines 51-55); and

executing an image process for making recording and a display, which are related to the captured image data, based on the image data to be recorded and the image data to be displayed, which are stored in said storing unit (fig. 5, items 11, 17, col. 8, lines 25-29 and 51-55).

As to claim 13, Ikeyama teaches an electronic camera apparatus (col. 1, lines 10-15), comprising:

an A/D converting unit obtaining captured image data by A/D converting an image signal that is obtained by capturing an image (fig. 5, item 4, col. 7, lines 32-36);

first image data processing unit executing a preprocess for generating image data to be recorded from the captured image data (fig. 5, item 5, col. 8, lines 47-50);

second image data processing unit, which is allowed to execute a process in parallel with the preprocess executed by said first image data processing unit, executing a preprocess that includes a filter process and a pixel number conversion process in order to generate image data to be displayed, whose data amount is smaller than the image data to be recorded, from the captured image data (fig. 5, item 9, col. 2, lines 9-15 and col. 8, lines 16-24);

storing means for temporarily storing both image data, which is obtained by said first image data processing unit and for which the preprocess for generating image

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data to be recorded is executed (fig. 5, item 18, col. 8, lines 25-29), and image data, which is obtained by said second image data processing unit and for which the preprocess for generating image data to be displayed is executed (fig. 5, item 12, col. 8, lines 51-55); and

a third image data processing unit executing an image process for making recording and a display, which are related to the captured image data, based on the image data to be recorded and the image data to be displayed, which are stored in said storing unit (fig. 5, items 11,17, col. 8, lines 25-29 and 51-55).

As to claim 2, Ikeyama teaches the pixel number conversion process is configured to perform interpolation by selecting a combination so that pixel positions for which pixel number conversion is performed become suitable according to a reduction in an amount of image data (col. 18, lines 46-62).

As to claims 3-4 Ikeyama teaches the filter process and the pixel number conversion process are configured as an LPF (Low Pass Filter) process, and a pixel number conversion process including an interpolation process considering a pixel position relationship after pixel number conversion, for a horizontal direction of the captured image data, and as an LPF process and a pixel number conversion process, which use a line buffer, the pixel number conversion process including an interpolation process considering a pixel position relationship after pixel number conversion, for a vertical direction of the captured image data (figs. 21-25, from col. 18, line 63 to col. 23, line 36).

As to claim 8 Ikeyama teaches third image data processing unit is configured to execute an image data compression process as an image process for recording (fig. 5, items 19-20, col. 8, lines 61-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeyama in view of Takemoto (7,081,918 B2).

Ikeyama does not disclose a fourth image data processing unit, which is allowed to execute a process in parallel with the preprocess executed by said first image data processing unit, generating index image data, whose data amount is smaller than the image data to be displayed, from the captured image data.

Takemoto teaches image data processing unit, which is allowed to execute a process in parallel with the preprocess executed by said first image data processing unit, generating index image data, whose data amount is smaller than the image data to be displayed, from the captured image data (fig. 7, item D20, col. 19, lines 31-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Takemoto into Ikeyama system in order to display index images (col. 19, lines 35-42 in the Takemoto reference.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeyama in view of Oochi (US 2007/0035654 A1).

Ikeyama does not disclose the image signal is obtained by capturing an image with a progressive scanning method or an interlaced scanning method.

Oochi teaches the image signal is obtained by capturing an image with a progressive scanning method (paragraph 0062).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Oochi into Ikeyama system in order to images without blurring (paragraph 0006 in the Oochi reference.

Allowable Subject Matter

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4. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 5 the major difference between the teaching of the prior art of record (Ikeyama, Takemoto and Oochi) and the instant invention is that a multiplier multiplying the image data, for which the interpolation process is executed by said horizontal direction pixel number converting unit, by factors for a filter process for a vertical direction, and an interpolation process for reducing an amount of image data in the vertical direction, a line buffer temporarily storing the image data obtained as a result of multiplication made by said multiplier in units of lines.

Claim 6 depend on claim 5:

Relative to claim 7 the major difference between the teaching of the prior art of record (Ikeyama, Takemoto and Oochi) and the instant invention is that if the preprocess by said second image data processing unit is executed for captured image data obtained by capturing an image with a progressive scanning method, an LPF process and a pixel number conversion process that includes an interpolation process considering a pixel position relationship after pixel number conversion are executed by using at least two line buffers for the vertical direction of the captured image data.


Telephone Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
03.23.07



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